

REMARKS

Claims 1-36 are pending in this application. Claims 12-35 are presently withdrawn from consideration by way of a restriction requirement. By this Amendment, claims 1 and 2 are amended to recite that the optical axis is a same straight line to distinguish over Pommer et al. as discussed herein, claim 3 is amended to be in independent form by incorporating claim 1 therein, claims 4 and 6 are amended to overcome the rejection under 35 U.S.C. §112, second paragraph, and claim 36 is added.

No new matter is added by this Amendment. Support for the amendments to claims 1 and 2 can be found in the original specification, for example at paragraph [0033] and the Figures. Support for new claim 36 can be found in the original specification, for example including in original claims 2 and 3.

I. Request for Acknowledgement of Disclosed Information

An Information Disclosure Statement was filed on November 16, 2004. An initialed copy of the Form PTO-1449, indicating the Examiner's consideration of the disclosed reference, was not returned to the undersigned with the Office Action.

Accordingly, Applicants respectfully request that the Examiner initial the PTO-1449 and return a copy to the undersigned with the next communication from the Patent Office. For the Examiner's convenience, a copy of the PTO-1449 is attached.

II. Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 4 and 6 were rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite. The Patent Office alleges that the term "optical elements" in these claims lacks antecedent basis. This rejection is respectfully traversed.

By this Amendment, claim 4 is amended to depend from claim 1, thereby correcting any antecedent basis issue. Claim 6 is amended to refer to the light emitter and the light receiver in order to correct the antecedent basis issue.

In view of the foregoing amendments to claims 4 and 6, reconsideration and withdrawal of this rejection are respectfully requested.

III. Rejections Under 35 U.S.C. §103(a)

A. Relying Upon Buchter

Claims 1-3 and 7-11 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,536,957 (Buchter). This rejection is respectfully traversed.

Buchter describes an optical transceiver assembly comprising a plurality of optical signal sources for providing downstream signals and a plurality of photodetectors for detecting upstream signals. An optical module is disposed between the optical signal sources and the photodetectors, where the optical module includes a surface transmissive to either one of the downstream and upstream signals, and substantially reflective to the other of the downstream and upstream signals, and diffractive regions for deflecting the downstream signals into the optical fibers and the upstream signals into the optical module. The optical module also includes diffractive regions for deflecting the downstream signals from the optical signal sources into the optical module and the upstream signals into the photodetectors. The optical module additionally includes an array of lenses for imaging the downstream signals into the optical module and into the optical fibers, and for imaging the upstream signals into the optical module and into the photodetectors. See the Abstract.

Buchter fails to teach or suggest the optical transceiver of claims 1 and 2.

In the Office Action, the Patent Office alleged that Buchter's adapter 31 (Fig. 2) corresponded to an optical socket, lens array 127 (Fig. 2) corresponded to the light-condensing device, photodetectors 113 (Figure 2) corresponded to the optical element, and multicoated optical surfaces 122 and 124 (Figures 6 and 7) corresponded to the transparent substrate.

However, it is incorrect to characterize the multicoated optical surfaces 122 and 124 in Buchter as transparent substrates. These surfaces are coatings, not substrates.

Moreover, even if one were to view the coatings as substrates, these coated surfaces do not support the adapter 31 ("optical socket") or photodetectors 113 ("optical element") as required in claims 1 and 2. Buchter shows and describes the adapter and photodetectors as completely separate from the multicoated surfaces 122 and 124. Thus, the multicoated surfaces are not shown or described to support the required elements in any way. As a result, the structure of Buchter fails to teach or suggest the optical transceiver of claims 1 and 2.

Finally, Buchter also does not teach or suggest an optical transceiver wherein the elements (i.e., the optical fiber, the light-condensing device, and the optical element) are aligned on an optical axis of the optical transceiver that is along the same straight line. For example, in Buchter, the optical fiber 33b and photodetector 113b (Fig. 2) are not aligned in a same straight line.

For the foregoing reasons, Applicants submit that Buchter does not teach or suggest the optical transceiver of claims 1 and 2. Reconsideration and withdrawal of this rejection are respectfully requested.

B. Relying Upon Pommer

Claims 1 and 7-11 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2003/0201462 (Pommer). This rejection is respectfully traversed.

Pommer describes an integrated circuit/optoelectronic packaging system (100) that comprises OE and IC components packaged to provide electrical input/output, thermal management, an optical window, and precise passive or mechanical alignment to external optical receivers or transmitters. See the Abstract.

In the Office Action, it was alleged that Fig. 17 of Pommer illustrates an optical transceiver satisfying all of the requirements of claim 1. Applicants respectfully disagree.

At paragraph [0260], Pommer describes that the interface structure of Figs. 13A and 13B may optionally include a lens formed in the top or bottom surface of the transparent insulating substrate 117 "and situated in the optical path between the optoelectronic device and the optical fiber core." The Patent Office has cited this as allegedly describing inclusion of a light-condensing device in the optical unit.

However, even if one were to accept that the lens mentioned in paragraph [0260] is a light-condensing device, such construction still does not teach or suggest the optical transceiver of claim 1. Specifically, claim 1 requires that the optical fiber, the light-condensing device, and the optical element be aligned on an optical axis of the optical transceiver, wherein the optical axis is a same straight line. Merely describing the lens to be in an optical path does not teach or suggest that the lens is aligned on the optical axis in the optical path. For example, as was discussed above with respect to Buchter, the optical fiber and photodetector are in an optical path, but are not aligned in a same straight line optical axis of the optical path.

Pommer thus differs from the claim 1 optical transceiver in at least failing to teach or suggest an optical transceiver wherein an optical fiber, a light-condensing device, and an optical element are aligned on an optical axis of the optical transceiver, and wherein the optical axis is a same straight line. Reconsideration and withdrawal of the rejection are thus respectfully requested.

Finally, with respect to claim 3 and new claim 36, Applicants note that prior dependent claim 3 was not rejected relying upon Pommer. Accordingly, claim 3 and new claim 36 (which includes the requirements of prior claim 3 therein) are believed to define over Pommer.

IV. Rejoinder

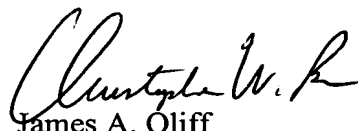
Upon allowance of claims 1-11 and 36, rejoinder of method claims 12-35 is respectfully requested.

V. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-36 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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